CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2008 CERTIFIED

Job No.: CQCE/BBMP/MY/W.No.12/2019-20 Date : 08.11.2019

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.

Agency : **Sri. M. Yogesh (M/s. Professional global infrastructure private limited),** Bangalore.

Name of Work : Restoration of road cut portion done by BWSSB in Shettyhalli old village area in ward no.12, Shettyhalli Sub Division , BBMP, Bangalore.

Date of Testing : 08.11.2019

Material : Sand

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	79	7.90	7.90	92.1	90-100
2.36	156	15.60	23.50	76.5	75-100
1.18	162	16.20	39.70	60.3	55-90
600 Micron	218	21.80	61.50	38.5	35-59
300 Micron	215	21.50	83.00	17.0	8-30
150 Micron	136	13.60	96.60	3.4	0-10

Note:

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2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 30days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

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Job No.: CQCE/BBMP/MY/W.No.12/2019-20

Date : 08.11.2019

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.

Agency : **Sri. M. Yogesh (M/s. Professional global infrastructure private limited),** Bangalore.

Name of Work : Restoration of road cut portion done by BWSSB in Shettyhalli old village area in ward no.12, Shettyhalli Sub Division , BBMP, Bangalore.

Date of Testing : 08.11.2019

Material : Stone Dust

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	84	8.40	8.40	91.6	90-100
2.36	156	15.60	24.00	76.0	75-100
1.18	168	16.80	40.80	59.2	55-90
600 Micron	212	21.20	62.00	38.0	35-59
300 Micron	220	22.00	84.00	16.0	8-30
150 Micron	132	13.20	97.20	2.8	0-10

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Job No.: CQCE/BBMP/MY/W.No.12/2019-20 16.11.2019

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.
Agency	**Sri. M. Yogesh (M/s. Professional global infrastructure privited limited),** Bangalore.
Name of Work	Restoration of road cut portion done by BWSSB in Shettyhalli old village area in ward no.12, Shettyhalli Sub Division , BBMP, Bangalore.
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Sample ID	WMM Layer
Date of Testing	16.11.2019

Result : Flakiness Index = **12.16%**

Elongation Index = **14.25%**

Result : Combined Flakiness & Elongation index **26.41%**

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

Note:

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Job No.: CQCE/BBMP/MY/W.No.12/2019-20 Date 01.08.2019

FIELD DENSITY TEST BY SAND REPLACEMENT METHOD
(IS : 2720 - Part 28)

Client : **Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.

Agency : **Sri. M. Yogesh (M/s. Professional global infrastructure privited limited),** Bangalore.

Name of work : Restoration of road cut portion done by BWSSB in Shettyhalli old village area in ward no.12, Shettyhalli Sub Division , BBMP, Bangalore.

Date of Testing : 31.07.2019 to 01.08.2019

Material Source : Wet Mix Macadam

Max.Dry Density g/cc	2.25
Optium Moisture Content (%)	7.24
Bulk Density of Sand g/cc(ys)	1.36 g/cc
Wt. of Sand in Cone gms	335 grams

DETERMINATION OF WET DENSITY	
Test Holes No's	1
Offset from centre of alignment & chainage	Shettyhalli old Village
Wt of the Moist soil from excavated hole = W	1980
Wt.of Cylinder+Sand before pouring (gm) (w1)	6800
Wt.of Sand in the cone (gm) (w2)	335
Wt.of the Cylinder and sandfilling the excavated hole (w4)	5315
Wt of the sand in the excavated hole wb=w1-w4-w2	1150
Volume of Sand in Hole = (v=wb/Ys)=cm^3	851.85
Insitu Bulk density Wet excavated soil Y=w/v	2.32
Moisture Content (%)	4.90
DETERMINATION OF DRY DENSITY	
Field dry Density (g/cc)	2.22
Field compaction achieved (%)	98.48
Required Compaction (%)	98

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Job No: CQCE/BBMP/MY/W.No.12/2019-20 19.12.2019

BITUMEN CONTENT AND GRADATION DETERMINATION OF OPEN GRADED PREMIX SURFACE
AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.
AGENCY	**Sri. M. Yogesh (Professional global infrastructure privited limited),** Bangalore.
NAME OF THE WORK	Restoration of road cut portion done by BWSSB in Shettyhalli old village area in ward no.12, Shettyhalli Sub Division , BBMP, Bangalore.
SAMPLE I/D	Sample Supplied by Agency
DATE OF TESTING	19.12.2019

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	475	474
3. Weight of Asphalt and Mineral matter Extracted, g	25	26
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	25	26
7. Bitumen content in %	5.00	5.20
8. Average	5.10	

GRADATION AFTER EXTRACTION

TABLE - 1

Sieve size in mm	Percent Passing, %		Specified Limits as per MORTH specification
	Sample 1	Sample 2	
13.2	100.00	100.00	100
11.2	96.2	94.9	88-100
5.6	46.8	45.8	31-52
2.8	15.8	16.4	5.-25
0.09	2.9	3.8	0-5

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Job No.: CQCE/BBMP/MY/W.No.12/2019-20 Date: 24.12.2019

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.
Agency	**Sri. M. Yogesh (M/s. Professional global infrastructure private limited),** Bangalore.
Name of Work	Restoration of road cut portion done by BWSSB in Shettyhalli old village area in ward no.12, Shettyhalli Sub Division , BBMP, Bangalore.
Technical Reference	IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	24.12.2019

Result : Flakiness Index = **11.98%**

Elongation Index = **13.16%**

Result : Combined Flakiness & Elongation index **25.14%**

Comments:

→ Maximum allowable Flakiness & Elongation Index for Semi Dense Bituminous Concrete is 30%

Note:

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